Aug. 30, 1932. H. C. FISHER 1,874,093

LOG TURNER AND LOADER

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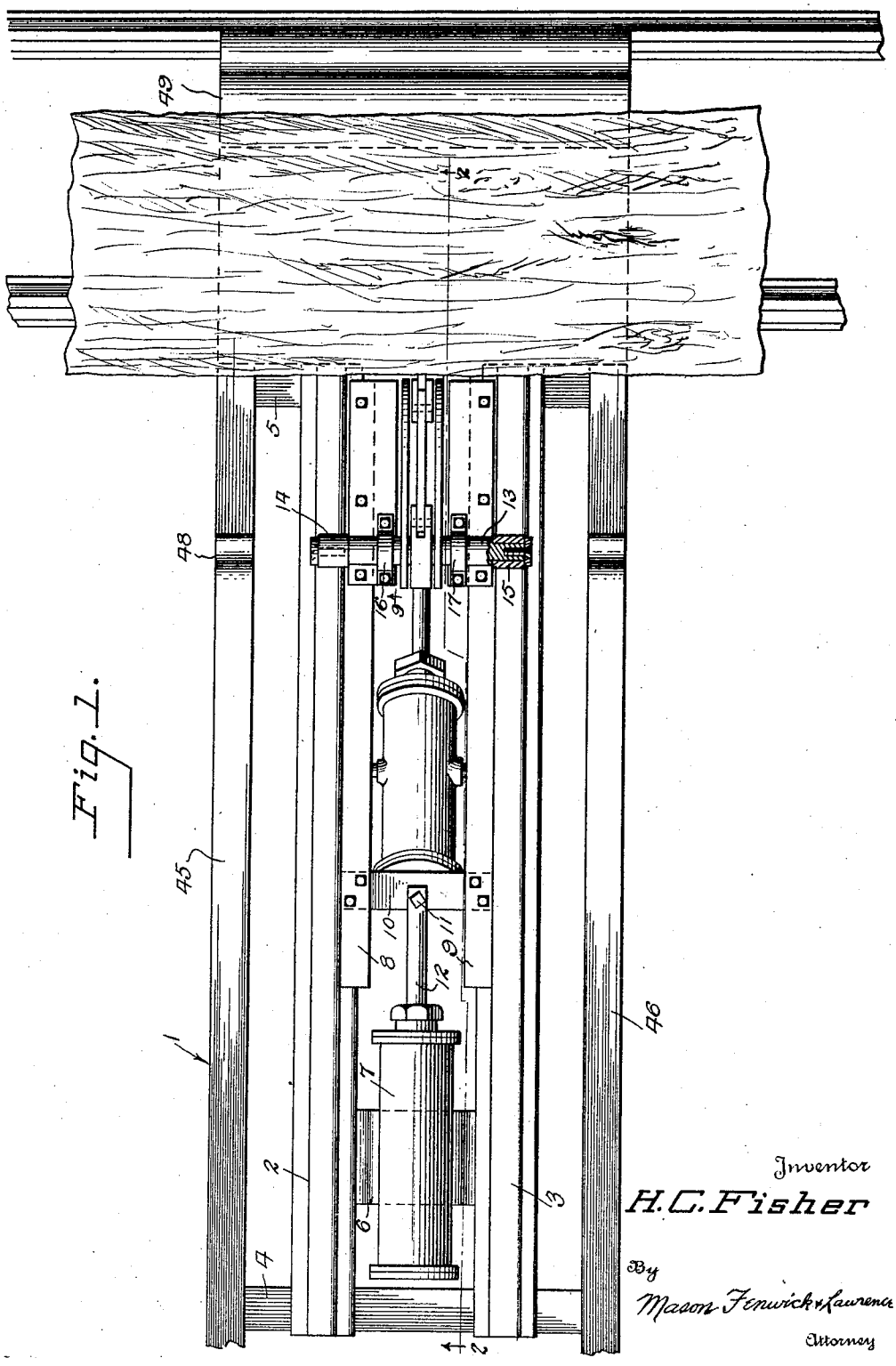


Fig. 1.

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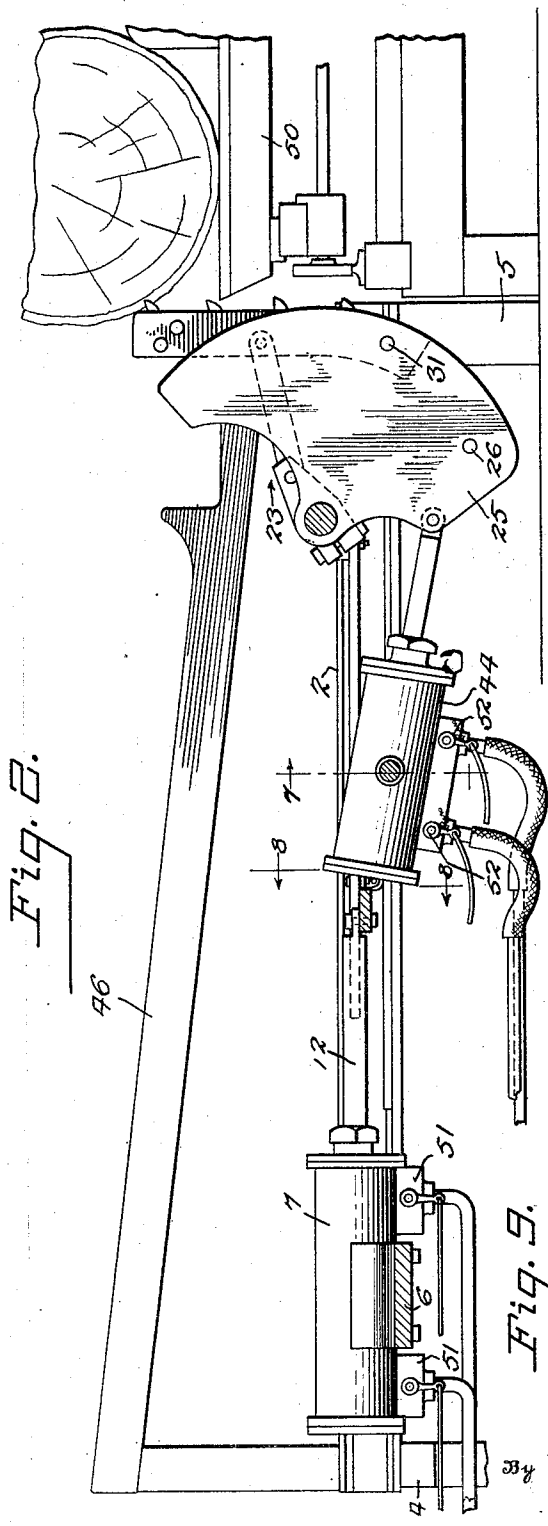


Fig. 2.

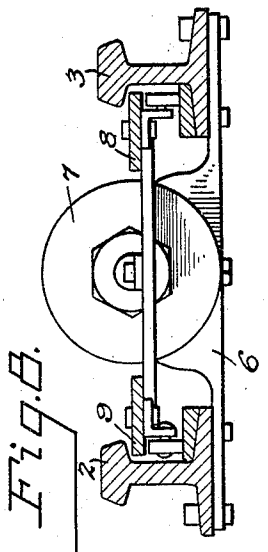


Fig. 8.

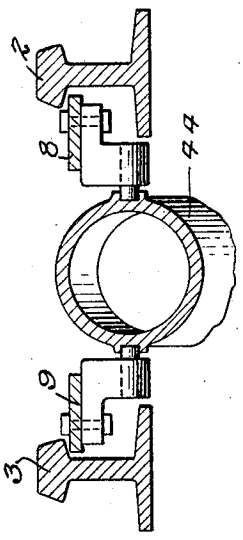


Fig. 7.

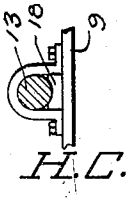


Fig. 9.

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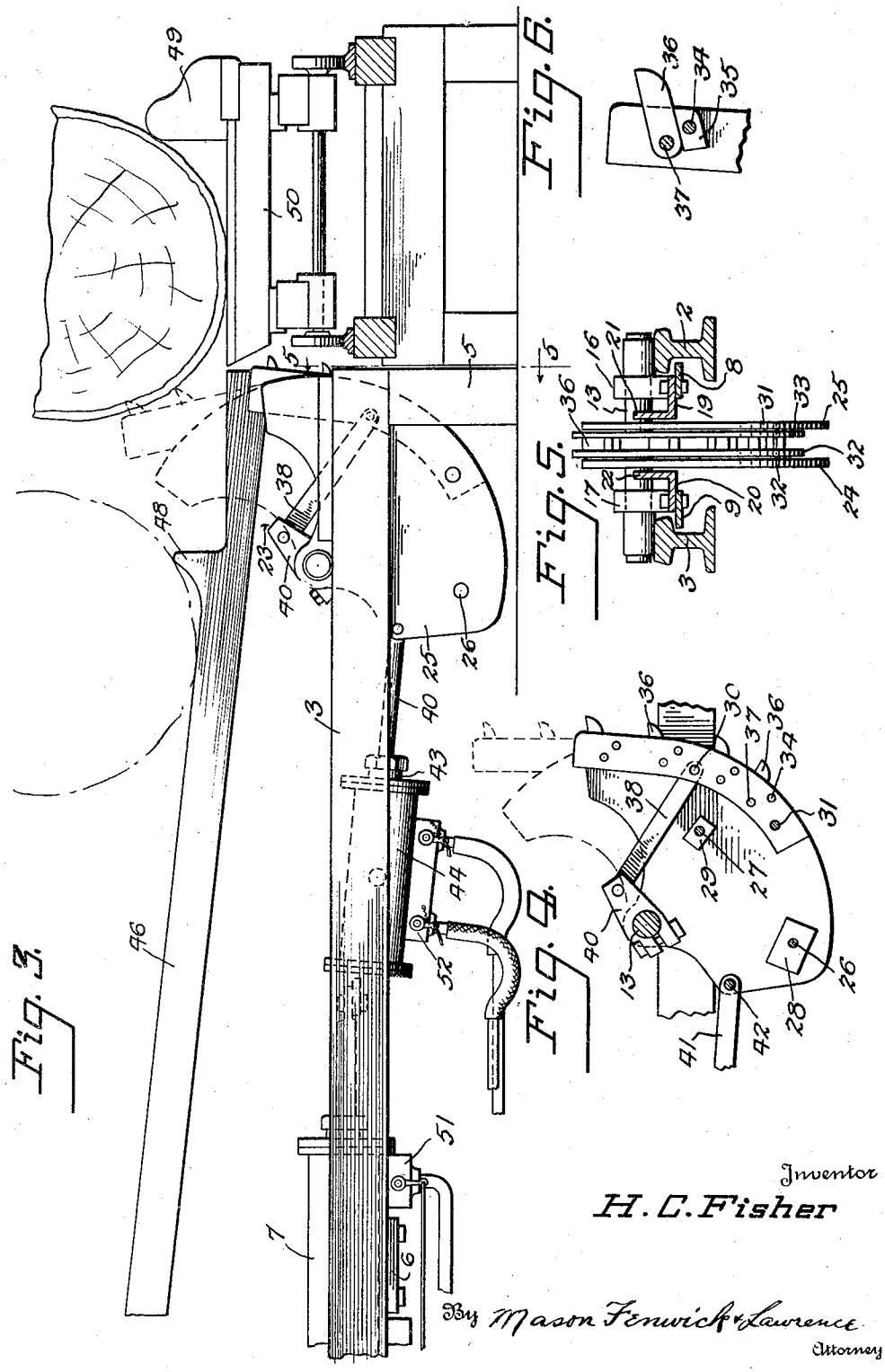
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LOG TURNER AND LOADER

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Patented Aug. 30, 1932 1,874,093

UNITED STATES PATENT OFFICE

HENRY C. FISHER, OF SELMA, ALABAMA

LOG TURNER AND LOADER

Application filed March 2, 1932. Serial No. 596,326.

This invention relates to sawmill machinery and is primarily concerned with mechanism for moving a log from a predetermined position on a log deck onto a sawmill carriage, and for turning the log into any desired position on the sawmill carriage.

In sawmills, as usually constructed, it is necessary to provide an excavation below the log deck, and immediately in front of the log carriage, to permit the operation of the mechanism involved in loading and turning the logs.

The main object of the invention is to provide a log turner which can be placed directly on the floor of a ground mill and can be moved very readily as a whole from one location to another.

Another object of the invention is to provide a log turner in which the operating mechanism occupies very little space vertically, and which can be very readily and cheaply manufactured.

Other objects of the invention will become apparent as the detailed description thereof proceeds.

In the drawings:

Figure 1 is a plan view of the log turning mechanism embodying the present invention;

Figure 2 is a vertical section taken on the line 2—2 of Figure 1;

Figure 3 is a side elevation of the log turning mechanism;

Figure 4 is a fragmentary side elevation of part of the log turning mechanism, a part thereof being removed to show details of construction;

Figure 5 is a section taken on the line 5—5 of Figure 3;

Figure 6 is a fragmentary detail of a log turning part of the mechanism;

Figure 7 is a section taken on the line 7—7 of Figure 2;

Figure 8 is a section taken on the line 8—8 of Figure 2; and

Figure 9 is a section taken on the line 9—9 of Figure 1.

The mechanism as illustrated in the drawings comprises framework, designated generally by the reference character 1, and including a pair of parallel rails 2 and 3, suitably connected at their opposite ends by standards 4 and 5. A cross rail 6 is secured to the bottom flanges of the rails 2 and 3, and a steam cylinder 7 is fixed to the cross rail 6 with its axis parallel to the side rails 2 and 3 and equi-distantly spaced between them.

A slide designated generally by the reference numeral 8 (see Figure 8) is slidably mounted between the parallel rails 2 and 3. This slide comprises runners 8 and 9 connected to each other near one end by a cross rail 10 which is connected by pivot 11 to one end of a piston rod 12, extending from the usual position (not shown) within the cylinder 7.

A shaft 13, provided at its opposite ends with rollers 14 and 15, is fixed to the runners 8 and 9 by means of the U-shaped clamps 16 and 17 and pillow blocks 18 (see Figure 9). Angle iron plates 19 and 20 are suitably secured to the runners 8 and 9, respectively, and have their upturned flanges 21 and 22 spaced apart to form a guideway for the log moving and turning mechanism, designated generally by the reference character 23. The log turning mechanism 23 comprises a pair of arcuate plates 24 and 25 secured to each other at the lower ends by bolts or rivets 26 and 27, passing through spacers 28 and 29 arranged between the arcuate plates 24 and 25.

A log turning tooth member 30 has one end thereof pivoted between the plates 24 and 25 by means of the pivot 31. This tooth member 30 comprises a pair of plates 32 and 33 secured to each other in spaced apart relationship by a plurality of rivets 34 passing through spacers 35 arranged between the plates 32 and 33. The log rolling teeth 36 of a form common in inventions of this character, are pivoted immediately above the spacer plates 35 by means of the rivets 37, and normally hang by gravity against the spacer plates 35, as shown in Figure 6 of the drawings.

The toothed member 30 is swung about its pivot 31 by means of a link 38 (see Figure 4) having one end pivotally connected between the plates 32 and 33, the other end

of the link 38 being pivoted to the end of a bifurcated lug 40 securely clamped to the shaft 13.

The plates 24 and 25 are pivoted on the shaft 13 and are rotated about said shaft by means of a piston rod 41 which is pivotally connected at one end to a pivot 42, suitably secured to the plates 24 and 25. The rod 41 slides through a packing gland 43 extending from a steam cylinder 44 which is pivoted at its center on suitable bearings secured to the runners 8 and 9 of the slide.

The log deck 1 comprises the usual runners 45 and 46, suitably supported on the framework and provided with stops 47 and 48. The runners terminate vertically over the standard 5 and are adapted to be positioned close to the track 49 upon which the carriage 50 is adapted to move.

The cylinders 7 and 44 are connected to the usual valve controls 51 and 52 to control the admission of steam thereto and the operation of the mechanism in general. These controls are old and well known and are not illustrated in detail herein.

The operation of this apparatus will be obvious to persons skilled in this art from the foregoing disclosure.

While I have described my invention as embodied in concrete form and as operating in a specific manner in accordance with the provisions of the patent statutes, it should be understood that I do not limit my invention thereto, since various modifications thereof will suggest themselves to those skilled in the art without departing from the spirit of my invention, the scope of which is set forth in the annexed claims.

What I claim is:

1. In a log turner, framework including a log deck and parallel guideways below the same, a slide mounted in said guideways, a log turner pivoted on said slide, means pivotally mounted on said slide for rotating said turner, and means fixed to said framework for reciprocating said slide in said guideways.

2. In a log turner, framework including a log deck and a pair of parallel guideways below said deck, a fluid motor fixed in said framework between said guideways, a slide reciprocable in said guideways, means connecting said motor and slide for reciprocating the slide, a log turner pivoted on said slide, and a fluid motor carried by said slide for operating said log turner.

3. In a log turner, framework including a log deck, a slide reciprocable in said framework, log turning mechanism carried by said slide, and a fluid motor carried by said slide for operating said mechanism.

4. In a log turner, framework including a log deck, a fluid motor horizontally arranged in the framework below the log deck, a slide reciprocable, means connected to said motor for reciprocating said slide, a second fluid motor pivoted to said slide, log turning mechanism mounted on said slide, and means connected to the second motor and mechanism for operating said mechanism.

5. In a log turner, framework including a pair of parallel rails, a slide reciprocable on said rails, log turning mechanism pivoted on said slide, means fixed to said framework between said rails for reciprocating said slide, and means pivotally connected to said slide and carried thereby for operating said mechanism.

6. In a log turner, framework including a pair of parallel rails, a slide reciprocable on said rails, log turning mechanism pivoted on said slide, a fluid motor fixed to said framework between said rails, means for connecting said motor to said slide for reciprocating the slide, a second fluid motor pivotally mounted on said slide, and means operably connecting the second motor to said mechanism.

7. In a log turner, framework including a pair of parallel rails, a slide reciprocable rectilinearly in said rails, log turning mechanism pivoted to said slide near one end thereof, a fluid motor pivoted to said slide between said rails and operably connected to said mechanism, and a second fluid motor fixed to said frame for reciprocating the slide.

8. In a log turner, framework including a pair of parallel rails, a steam cylinder fixed to said framework between said rails, a slide reciprocable between said rails toward and from said cylinder, means connected to said slide and cylinder for reciprocating the slide, said cylinder having its axis parallel to said rails, log turning mechanism pivoted on said slide, and a second steam cylinder pivoted to said slide, and means operably connecting said second cylinder and mechanism.

9. In a log turner, framework including a pair of parallel rails, a steam cylinder fixed to said framework between said rails with its cylinder axis parallel to said rails, a slide reciprocable between said rails and connected for operation by said cylinder, log turning mechanism pivoted on said slide, a second steam cylinder pivoted to said slide to rock about an axis perpendicular to the axis of the first named cylinder, and means connecting the second cylinder to said mechanism for operating the same.

In testimony whereof I affix my signature.

HENRY C. FISHER.